

In the Disclosure

Please amend the disclosure as set out in Schedule B attached hereto.

Remarks

The Examiner has rejected claims 1-4, 10-13, 16-20 as being anticipated by US 5,219,164 to Peng. Peng '164 discloses a baseball bat with a central, tubular shaft or "stem 20" running the length of the barrel or main body 30, the taper section 31, and the tapered guard piece 50 ending before the separate component handle section 10. The object of Peng's construction is to reduce the shock transmitted to the handle portion of the bat. For this purpose, not only does the distal end of the tubular shaft in Peng, remote from the handle, terminate in an elastic end piece, but also the separate component-gripping handle 10 is separated from the core shaft by an elastic guard piece 50. The guard piece 50, which is specifically said to be elastic, separates the central tubular shaft from the outer gripping surface portion of the handle piece 10. The disclosure specifically states (column 6, lines 19-29):

"When the main body 30 of the shock absorbing baseball bat of the present invention strikes a ball, elastic end piece 40 and guard piece 50 therein substantially deform with stem 20 being displaced laterally with respect to main body 30. This action strongly reduces the shock which would normally be largely transmitted to the arms of a batter using a conventional rigid wooden or metallic bat."

It is a fundamental teaching of Peng that having a secondary handle or gripping component separated from the hitting component will strongly reduce shocks generated in the hitting component and normally transmitted to the gripping component continuous with the hitting component.

Today, it is known that it is useful to provide a "trampoline" effect in a bat barrel as a means of improving bat performance. It is known that this effect usefully reduces the amount of deformation that occurs in the baseball when it is struck, thus conserving energy and momentum that would otherwise be lost.

The principle objective of the present invention is to provide bats with larger hitting areas thereby increasing the sweet spot size and trampoline effect which together improve performance as defined by hit distance. Thus, the principle objective of the present invention differs from Peng's objective to reduce shock in the players

hands resulting from lost energy from Peng's lower performance bats.

It is believed by the present inventor that in striking the ball with a bat, considerably higher performance may be achieved if the supporting structure for the bat barrel is directly held by a user as opposed to being supported through an elastic connection present in a core shaft in the manner contemplated by Peng. The more the weight and strength of the batter is communicated through the bat to the ball, the farther the ball will be struck. The configuration adopted by Peng pursues an alternate object of reducing vibration in the handle. To achieve a reduction in vibration, Peng separates the gripped portion of the bat from the central core or stem by an elastic separator, guard piece 50. It is believed that the solution adopted by Peng will tend to provide a bat of reduced hitting performance. By reason of the deformation of the guard piece 50, the full weight and momentum of the batter will be less directly connected to the barrel, and consequently to the ball. Further, energy will be consumed in the deformation of the guard piece 50 that would otherwise contribute to the efficiency with which the ball is struck.

Whether or not this theory of the inventor is correct, the bat of the present invention differs to a patentable degree from that depicted in the Peng reference and from all other eight references cited. Claim 1 has been amended to read as follows:

"A tubular bat, having an overall bat length, for hitting a ball, the bat comprising:

- a) a core shaft having a core shaft length, including a handle portion for gripping the bat;
- b) a cylindrical barrel having a proximal portion and a distal portion with respect to the handle portion and having a constant diameter between said proximal and distal portions, the barrel ~~for~~ being connected to the core shaft;
- c) a first connecting structure for connecting the proximal portion of the barrel to the core shaft;
- d) a second connecting structure extending laterally from the core shaft for directly connecting the distal portion of the barrel to the core shaft;
- e) a separation gap disposed between the core shaft and the barrel;

wherein

- i) the barrel is for hitting the ball;
- ii) the separation gap is for allowing the barrel to elastically deform when the barrel hits the ball[.], and
- iii) the core shaft length extends substantially along the entire bat length and is of rigid, unitary, singular construction.

The feature that the core shaft is of rigid, unitary, singular construction has been made explicit by amendment to the text of the disclosure, and this is apparent from the drawings and description otherwise provided.

On this basis, a significant number of distinctions have been made between all the referenced prior art and Claim 1. Accordingly, it is submitted that Claim 1 as amended is directed only to novel and inventive subject matter. Further claims in the patent are all dependent on Claim 1 and as such should similarly qualify, not only by reason of their dependency but also by reason of the additional features that they add to the basic combination.

Claims 3 and 4 have been amended to further specify the character of the elements identified.

Claim 10 has been amended to clarify that the taper extends between the end of the barrel and the end of the handle portion.

Claim 16 provides for the presence of an end cap and Claim 17 has been amended to stipulate that the core shaft extends to and connects with the end cap.

Other claims of the original claims are original, withdrawn or have been canceled without prejudice.

New claims 23 through 28 effectively stipulate that both connecting structures extending between the core shaft and barrel extend laterally from the core shaft for directly connecting the distal and proximal portions of the barrel to the core shaft. This is the structure depicted in Figure 6.

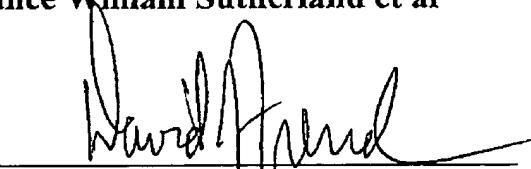
Conclusion

On this basis, it is believed that all of the examiner's concerns have been addressed and that the claims have now been placed in allowable form. Therefore, reconsideration is accordingly requested.

Respectfully submitted,

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Per:



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